In the Claims:

Please amend claims 7, 18-28 and 38-40 as indicated below.

1. (Original) A peer computing system comprising:

a plurality of peer nodes;

wherein at least a subset of the peer nodes are configured to participate in a peer discovery protocol to discover other peer nodes; and

wherein at least a subset of the peer nodes are configured to participate in a peer membership protocol for joining or forming a peer group with other peer nodes.

2. (Original) The peer computing system as recited in claim 1, wherein the member peer nodes in said peer group are configured to find and exchange content in said peer group.

3. (Original) The peer computing system as recited in claim 1, wherein said peer group is a collection of cooperating peer nodes that provide a common set of services in the peer computing system.

4. (Original) The peer computing system as recited in claim 3, wherein the common set of services include one or more core services.

5. (Original) The peer computing system as recited in claim 4, wherein the core services include:

a discovery service configured for use by member peer nodes in said peer group to discover advertised resources in the peer computing system, wherein

the resources include peers and peer groups, and wherein the discovery service uses the discovery protocol; and

a membership service configured for use by member peer nodes in said peer group to reject or accept group membership applications, wherein the membership service uses the membership protocol.

6. (Original) The peer computing system as recited in claim 1, wherein one or more peer nodes in said peer group are configured to participate in a peer resolver protocol configured for use in sending search queries from one peer group member to another peer group member.

7. (Currently amended) The peer computing system as recited in claim 1, wherein one or more peer nodes in said peer group are configured to participate in a pipe binding protocol configured for use in finding ~~the~~ a physical location of a pipe endpoint and binding to the pipe endpoint.

8. (Original) The peer computing system as recited in claim 1, wherein one or more peer nodes in said peer group are configured to participate in an endpoint routing protocol for enabling the peer nodes to request peer routing information to reach other peer nodes.

9. (Original) The peer computing system as recited in claim 1, wherein at least a subset of the peer nodes are configured to participate in a peer information protocol for enabling the peer nodes to learn about other peer nodes' capabilities and status.

10. (Original) The peer computing system as recited in claim 1, wherein each of the plurality of peer nodes is further configured to use an advertisement format for describing and publishing advertisements for resources in a peer-to-peer environment.

11. (Original) The peer computing system as recited in claim 10, wherein the resources include one or more of the peer nodes, peer groups, content, services, applications, pipes, and pipe endpoints, wherein the pipes are communications channels between one or more of the peer nodes, the services, and the applications in the peer-to-peer environment, and wherein the pipe endpoints are network interfaces on the peer nodes that are configured to be bound to the pipes to establish the communications channels.

12. (Original) A peer computing system comprising:

a plurality of peer nodes;

means for at least a subset of the peer nodes to discover resources in the peer computing system, wherein the resources include peer nodes and peer groups, and wherein the resources further include one or more of pipes, endpoints, services and content; and

means for at least a subset of the peer nodes to join or form a peer group with other peer nodes;

wherein said peer group is a collection of cooperating peer nodes that provide a common set of services in the peer computing system.

13. (Original) The peer computing system as recited in claim 12, further comprising means for member peer nodes in said peer group to reject or accept peer group membership applications.

14. (Original) The peer computing system as recited in claim 12, further comprising means for member peer nodes in said peer group to send search queries from one peer group member to another peer group member.

15.   (Original)   The peer computing system as recited in claim 12, further comprising means for member peer nodes in said peer group to bind to a pipe endpoint.

16.   (Original)   The peer computing system as recited in claim 12, further comprising means for member peer nodes in said peer group to request peer routing information to reach other peer nodes.

17.   (Original)   The peer computing system as recited in claim 12, further comprising means for the plurality of peer nodes to request information about other peer nodes' capabilities and status.

18.   (Currently amended)   ~~An article of manufacture~~ A tangible, computer-readable medium, comprising ~~software~~ program instructions computer-executable to implement a peer-to-peer platform comprising:

   a peer discovery protocol for discovering peers and peer groups in a peer-to-peer network;

   a peer membership protocol for use by the peers in applying for membership in one or more of the peer groups;

   wherein the peer-to-peer platform is configured for use in the peer-to-peer network to enable the peers to discover each other, to communicate with each other, and to cooperate with each other to form the peer groups.

19.   (Currently amended)   The ~~article of manufacture~~ computer-readable medium as recited in claim 18, wherein the peer-to-peer platform further comprises:

   a peer resolver protocol configured for use in sending search queries from one peer group member to another peer group member;

a peer information protocol for enabling the peers to learn about other peers' capabilities and status;

a pipe binding protocol configured for use in finding ~~the~~ a physical location of a pipe endpoint and binding the pipe endpoint to a peer; and

an endpoint routing protocol for enabling the peers to request peer routing information to reach other peers.

20. (Currently amended) The ~~article of manufacture~~ computer-readable medium as recited in claim 19, wherein each of the protocols defines one or more message formats configured for use in exchanging messages between the peers in accordance with the particular protocol.

21. (Currently amended) The ~~article of manufacture~~ computer-readable medium as recited in claim 18, wherein the peer-to-peer platform further comprises a peer resolver protocol configured for use in sending search queries from one peer group member to another peer group member.

22. (Currently amended) The ~~article of manufacture~~ computer-readable medium as recited in claim 18, wherein the peer-to-peer platform further comprises a pipe binding protocol configured for use in finding ~~the~~ a physical location of a pipe endpoint and in binding to the pipe endpoint.

23. (Currently amended) The ~~article of manufacture~~ computer-readable medium as recited in claim 18, wherein the peer-to-peer platform further comprises an endpoint routing protocol for enabling the peer nodes to request peer routing information to reach other peer nodes.

24. (Currently amended) The ~~article of manufacture~~ computer-readable medium as recited in claim 18, wherein the peer-to-peer platform further comprises a peer

information protocol for enabling the peer nodes to learn about other peer nodes' capabilities and status.

25. (Currently amended) The ~~article of manufacture~~ computer-readable medium as recited in claim 18, wherein the peer-to-peer platform further comprises a peer advertisement format configured for use in advertising the peers in the peer-to-peer network, wherein said discovering peers returns one or more peer advertisements formatted in accordance with the peer advertisement format.

26. (Currently amended) The ~~article of manufacture~~ computer-readable medium as recited in claim 18, wherein the peer-to-peer platform further comprises a peer group advertisement format configured for use in advertising the peer groups in the peer-to-peer network, wherein said discovering peer groups returns one or more peer group advertisements formatted in accordance with the peer group advertisement format.

27. (Currently amended) The ~~article of manufacture~~ computer-readable medium as recited in claim 18, wherein the peer discovery protocol is further configured for discovering one or more of pipes, endpoints, services and content in the peer-to-peer network.

28. (Currently amended) The ~~article of manufacture~~ computer-readable medium as recited in claim 27, wherein the peer-to-peer platform further comprises one or more of:

a pipe advertisement format configured for use in advertising pipes in the peer-to-peer network, wherein said discovering pipes returns one or more pipe advertisements formatted in accordance with the pipe advertisement format;

an endpoint advertisement format configured for use in advertising endpoints in the peer-to-peer network, wherein said discovering endpoints returns one

or more endpoint advertisements formatted in accordance with the endpoint advertisement format;

a service advertisement format configured for use in advertising services provided by the peers in the peer-to-peer network, wherein said discovering services returns one or more service advertisements formatted in accordance with the service advertisement format; and

a content advertisement format configured for use in advertising the content in the peer-to-peer network, wherein said discovering content returns one or more content advertisements formatted in accordance with the content advertisement format.

29. (Original) A method for discovering peer nodes on a peer-to-peer network, comprising:

a peer node broadcasting a peer discovery message on the peer-to-peer network; and

the peer node receiving one or more response messages to the peer discovery message from one or more other peer nodes on the peer-to-peer network, wherein the response messages each include information about the particular peer node, wherein the information is configured for use by the peer node in establishing a connection to the particular peer node; and

wherein the peer discovery message and the response messages are in a format defined by a peer discovery protocol comprised in a peer-to-peer platform, and wherein said broadcasting and said receiving are performed in accordance with the peer discovery protocol.

30. (Original) The method as recited in claim 29, further comprising:

the peer node broadcasting a peer group discovery message on the peer-to-peer network; and

the peer node receiving one or more peer group response messages to the peer group discovery message from one or more peer groups on the peer-to-peer network, wherein the peer group response messages each include information about the particular peer group, wherein the information is configured for use by the peer node in joining the particular peer group; and

wherein the peer group discovery message and the peer group response messages are in a format defined by the peer discovery protocol, and wherein said broadcasting a peer group discovery message and said receiving one or more peer group response messages are performed in accordance with the peer discovery protocol.

31. (Original) The method as recited in claim 29, further comprising:

the peer node broadcasting a pipe discovery message on the peer-to-peer network; and

the peer node receiving one or more pipe response messages to the pipe discovery message from one or more peers on the peer-to-peer network, wherein the pipe response messages each include information about the particular pipe, wherein the information is configured for use by the peer node in binding to the particular pipe; and

wherein the pipe discovery message and the pipe response messages are in a format defined by the peer discovery protocol, and wherein said broadcasting a pipe discovery message and said receiving one or more

pipe response messages are performed in accordance with the peer discovery protocol.

32. (Original) The method as recited in claim 29, further comprising:

the peer node broadcasting an endpoint discovery message on the peer-to-peer network; and

the peer node receiving one or more endpoint response messages to the endpoint discovery message from one or more peers on the peer-to-peer network, wherein the endpoint response messages each include information about the particular endpoint, wherein the information is configured for use by the peer node in binding to the particular endpoint; and

wherein the endpoint discovery message and the endpoint response messages are in a format defined by the peer discovery protocol, and wherein said broadcasting an endpoint discovery message and said receiving one or more endpoint response messages are performed in accordance with the peer discovery protocol.

33. (Original) The method as recited in claim 29, further comprising:

the peer node broadcasting a service discovery message on the peer-to-peer network; and

the peer node receiving one or more service response messages to the service discovery message from one or more peers on the peer-to-peer network, wherein the service response messages each include information about the particular service, wherein the information is configured for use by the peer node in accessing the particular service; and

wherein the service discovery message and the service response messages are in a format defined by the peer discovery protocol, and wherein said broadcasting a service discovery message and said receiving one or more service response messages are performed in accordance with the peer discovery protocol.

34. (Original) The method as recited in claim 29, further comprising:

the peer node broadcasting a content discovery message on the peer-to-peer network; and

the peer node receiving one or more content response messages to the content discovery message from one or more peers on the peer-to-peer network, wherein the content response messages each include information about the particular content, wherein the information is configured for use by the peer node in accessing the particular content; and

wherein the content discovery message and the content response messages are in a format defined by the peer discovery protocol, and wherein said broadcasting a content discovery message and said receiving one or more content response messages are performed in accordance with the peer discovery protocol.

35. (Original) A method for discovering peer groups on a peer-to-peer network, comprising:

a peer node broadcasting a peer group discovery message on the peer-to-peer network; and

the peer node receiving a peer group response messages to the peer group discovery message from a peer group on the peer-to-peer network,

wherein the peer group response message includes information about the peer group, wherein the information is configured for use by the peer node in joining the peer group; and

wherein the peer group discovery message and the peer group response message are in a format defined by a peer discovery protocol comprised in a peer-to-peer platform, and wherein said broadcasting a peer group discovery message and said receiving the peer group response message are performed in accordance with the peer discovery protocol.

36. (Original) The method as recited in claim 35, further comprising the peer node joining the peer group in accordance with the information received in the peer group response message.

37. (Original) The method as recited in claim 36, wherein said joining the peer group comprises:

the peer node sending a peer group membership application message to the peer group, wherein the peer group membership application includes information on the peer node's qualifications for membership in the peer group;

the peer group sending a peer group membership acceptance message to the peer node if the peer node qualifies for peer group membership;

wherein the peer group membership application message and the peer group membership acceptance message are in a format defined by a peer membership protocol comprised in the peer-to-peer platform.

38.   (Currently amended)   A ~~carrier~~ <u>tangible, computer-readable</u> medium, comprising program instructions, wherein the program instructions are computer-executable to implement:

a peer node broadcasting a peer discovery message on the peer-to-peer network; and

the peer node receiving one or more response messages to the peer discovery message from one or more other peer nodes on the peer-to-peer network, wherein the response messages each include information about the particular peer node, wherein the information is configured for use by the peer node in establishing a connection to the particular peer node; and

wherein the peer discovery message and the response messages are in a format defined by a peer discovery protocol comprised in a peer-to-peer platform, and wherein said broadcasting and said receiving are performed in accordance with the peer discovery protocol.

39.   (Currently amended)   The ~~carrier~~ <u>computer-readable</u> medium as recited in claim 38, wherein the program instructions are further computer-executable to implement:

the peer node broadcasting a peer group discovery message on the peer-to-peer network; and

the peer node receiving one or more peer group response messages to the peer group discovery message from one or more peer groups on the peer-to-peer network, wherein the peer group response messages each include information about the particular peer group, wherein the information is configured for use by the peer node in joining the particular peer group; and

wherein the peer group discovery message and the peer group response messages are in a format defined by a peer discovery protocol comprised in a peer-to-peer platform, and wherein said broadcasting a peer group discovery message and said receiving one or more peer group response messages are performed in accordance with the peer discovery protocol.

40.   (Currently amended)   A ~~carrier~~ <u>tangible, computer-readable</u> medium, comprising program instructions, wherein the program instructions are computer-executable to implement:

a peer node broadcasting a peer group discovery message on the peer-to-peer network; and

the peer node receiving a peer group response messages to the peer group discovery message from a peer group on the peer-to-peer network, wherein the peer group response message includes information about the peer group, wherein the information is configured for use by the peer node in joining the peer group; and

wherein the peer group discovery message and the peer group response messages are in a format defined by a peer discovery protocol comprised in a peer-to-peer platform, and wherein said broadcasting a peer group discovery message and said receiving one or more peer group response messages are performed in accordance with the peer discovery protocol.